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INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference WOP0270A | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEPA/16) | |
| International application No. PCT/GB 03/03132 | International filing date (day/month/year) 18.07.2003 | Priority date (day/month/year) 09.08.2002 |
| International Patent Classification (IPC) or both national classification and IPC A47L5/28 | | |
| Applicant DYSON LTD et al. | | |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.
- ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:
- I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

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| Date of submission of the demand 05.03.2004 | Date of completion of this report 09.11.2004 |
| Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465 | Authorized Officer Lodato, A Telephone No. +49 89 2399-8037  |

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB 03/03132

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17):*)

Description, Pages

1, 2, 4-22 as originally filed
3 received on 05.10.2004 with letter of 29.09.2004

Claims, Numbers

8-32 as originally filed
1-7 received on 05.10.2004 with letter of 29.09.2004

Drawings, Sheets

1/13-13/13 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 31

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 31 are so unclear that no meaningful opinion could be formed (*specify*):

see separate sheet

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☒ no international search report has been established for the said claims Nos. 31

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the Standard.

☐ the computer readable form has not been furnished or does not comply with the Standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

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| Novelty (N) | Yes: Claims | 1-30, 32 |
| | No: Claims | |
| Inventive step (IS) | Yes: Claims | |
| | No: Claims | 1-30, 32 |
| Industrial applicability (IA) | Yes: Claims | 1-30, 32 |
| | No: Claims | |

2. Citations and explanations

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB 03/03132

see separate sheet

Re Item III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. Claim 31 does not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined. The claim attempts to define the subject-matter by a reference to the drawings. All the claims should specify clearly all of the essential features needed to define the invention.
2. Furthermore, the above-mentioned lack of clarity notwithstanding, claim 31 is considered by this Authority to be covered by the provisions of Rule 66.1(e) PCT. Consequently, no opinion will be formulated with respect to novelty, inventive step and industrial applicability of the subject-matter of this claim.

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents:

D1: US-A-6 141 822 (JIMENEZ ANTONIO ET AL) 7 November 2000 (2000-11-07)
D2: GB 568 958 A (GEN ELECTRIC CO LTD; FRANK HARVEY; THOMAS JOSEPH CURTIS) 27 April 1945 (1945-04-27)

The document D1 is regarded as being the closest prior art to the subject-matter of independent claim 1.

2. The objective of the invention is to provide a surface treating appliance with improved manoeuvrability. This object is achieved by the technical features of independent claim 1.
3. The solution proposed in claim 1 of the present application cannot be considered to involve an inventive step (Article 33(3) PCT) for the following reasons:
 - 3.1 The document D1 shows the following features of claim 1 (see description column 3, line 19 - column 6, line 19; figures 1, 4-6, 8):
A surface treating appliance (10) comprising a main body (11) and a support assembly (30) which is mounted to the main body and arranged to roll with respect

to the main body for allowing the appliance to be rolled along a surface, the support assembly housing at least one component of the appliance.

3.2 The subject-matter of claim 1 therefore differs from the cleaning head described in D1 in that:

- i) the main body has a user-operable handle, by means of which the appliance can be rolled along the surface.

3.3 With respect to feature i), no particular or surprising technical effect seems to be immediately derivable from this apparently minor structural difference. Moreover this distinguishing feature is known from document D2 (cited in the search report; ref. fig. 1, d. p. 2, l. 96-98) which discloses a surface treating appliance with a handle (30) whereby the appliance is moved over the surface to be cleaned. Therefore to adopt the restriction i) in the surface treating appliance described in D1 is merely one of several straightforward possibilities of normal design from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill.

The applicant's attention it is further drawn to the fact that also the documents US 5,323,510, US 5,584,095 and EP 1,136,029, cited as examples of prior art in the present application, disclose surface treating appliances comprising a main body having a user-operable handle.

4. Dependent claims 2-30, 32 do not seem to contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT at least in respect of inventive step (see in this respect the documents cited against each claim in the search report).

The invention provides a surface treating appliance comprising a main body having a user-operable handle, and a support assembly which is mounted to the main body and arranged to roll with respect to the main body for allowing the appliance to be rolled along a surface by means of the handle, the support assembly housing at least one component of the appliance.

The provision of a rolling support assembly aids manoeuvrability of the appliance and positioning a component of the appliance in the support assembly makes efficient use of the space within the support assembly. It can also increase the stability of the appliance.

The component may be a motor for driving a surface agitating device or means for acting on a fluid flow, in which case fluid inlets and outlets may be provided in the support assembly. The means for acting on the fluid flow can be a suction generating means, such as a motor driven impeller, a filter or some form of separating apparatus.

Preferably the component is housed within the support assembly such that the centre of mass of the component is aligned with the centre of the support assembly as this further aids manoeuvrability. Positioning the motor within the support keeps the centre of mass of the overall appliance close to the floor surface.

Preferably the features of providing support for the rotatable support assembly and of ducting air into and/or out of the assembly are combined by providing a support which has a hollow interior channel.

The term "surface treating appliance" is intended to have a broad meaning, and includes a wide range of machines having a head for travelling over a surface to clean or treat the surface in some manner. It includes, inter alia, machines which apply suction to the surface so as to draw material from it, such as vacuum cleaners (dry, wet and wet/dry), as well as machines which apply material to the surface, such as polishing/waxing machines, pressure washing machines, ground marking machines and shampooing machines. It also includes lawn mowers and other cutting machines.

Claims

1. A surface treating appliance comprising a main body having a user-operable handle, and a support assembly which is mounted to the main body and arranged to roll with respect to the main body for allowing the appliance to be rolled along a surface by means of the handle, the support assembly housing at least one component of the appliance.
2. An appliance according to claim 1 wherein the component is mounted within the support assembly such that a rolling surface of the support assembly rotates around the component.
3. An appliance according to claim 2 further comprising a shell, mounted within the support assembly, for supporting the component, and wherein the rolling surface is arranged to rotate around the shell.
4. An appliance according to claim 1 wherein the component is mounted within the support assembly such that it rotates with the support assembly during rolling movement of the support assembly.
5. An appliance according to any preceding claim wherein the support assembly comprises a fluid inlet for receiving fluid flow and a fluid outlet for exhausting fluid, and the component comprises means for acting on the fluid flow received through the inlet.
6. An appliance according to claim 5 wherein the fluid inlet is substantially coaxial with the axis of rotation of the support assembly.
7. An appliance according to any claim 5 or 6 wherein the fluid inlet comprises an inlet duct arranged to provide support between the main body and the support assembly.